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UNITED STATES PATENT AND TRADEMARK OFFICE

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Technology Center 2100

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/061,706
Filing Date: April 17, 1998
Appellant(s): KEPHART ET AL.

Frank V. DeRosa
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 13, 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2)   Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be

directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3)   Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4)   Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is

correct.

(5)   Summary of Invention

The summary of invention contained in the brief is correct.

(6)   Issues

The appellant's statement of the issues in the brief is correct.

(7)   Grouping of Claims

Appellant's brief includes a statement that the pending claims do not stand or fall together and

provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8)   Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,544,360	LEWAK ET AL.	8-1996
6,029,195	HERZ	2-2000
5,867,799	LANG ET AL.	2-1999

Ernst, Warren. "Using Netscape" QUE Corporation (1995), pp. 54-55, 66-67

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11, 13-21, 23-33, 44-45, 47- 51, 60-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewak et al. (hereinafter Lewak), U.S. Patent No. 5,544,360 issued August 1996, in view of Herz, U.S. Patent No. 6,029,195 issued February 2000.

In regard to independent claim 11, Lewak teaches a computer filing system utilizing various file categories, said system automatically commencing to assist a user with said categorizing and classifying (Lewak Abstract, also Figure 5 items 50, 60; compare with claim 11 *"an automated method"* and *"an automated classifier"*).

Lewak teaches suggesting file categories by correlating word patterns in a current file document with category descriptions utilizing an FC Manager (Lewak, column 8 lines 6-15, column 9 lines 50-55; compare with amended claim 11, *"classifying, with a classifier, a document..."*). Lewak does not specifically teach obtaining a plurality of <u>most likely</u> categorical labels. However, Herz teaches a method of generating for each user a customized rank-ordered listing of target objects most likely to be of interest to that user (Herz column 7 lines 10-16; compare with claim 11 *"...to obtain a plurality of most likely categorical labels"*, and *"...from the plurality of most likely categorical labels"*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the method of Herz to the method of Lewak, because of Herz's taught advantage of document suggestion, providing an efficient method of allowing users to select articles of interest from a large set of articles (Herz column 2 lines 40-42).

Lewak teaches linking category descriptions "Sent", "Received", "Action", and "Urgent" to a main category "E-Mail", so that said linking occurs when said category "E-Mail" is chosen, which provides reasonable suggestion to one of ordinary skill in the art at the time of the invention of the use of a categorization shortcut, since extra paths are created for said linked descriptions (Lewak column 15 lines 39-46; compare with claim 11 *"deriving a plurality of categorizations shortcuts..."*), which helps to provide freedom from the restrictions imposed by present day computer filing systems (Lewak column 3 lines 62-65).

Lewak teaches a method of a user interface, comprising a category window with category descriptions and types (Lewak, column 8 lines 31-38; compare with claim 11, *"displaying to the user, a representation of the plurality of most likely categorical labels"*).

Lewak teaches a method whereby categories describing the current file can be selected by a user (Lewak, column 8 lines 61-65; compare with claim 11, *"receiving from the user, data representative of one or more selected categorical labels"*).

Lewak teaches a method whereby after category selection is completed by the user, the new category/file associations are stored within a File Information Directory (Lewak, column 8 lines 66-67, column 9 lines 1-4; compare with claim 11, *"labeling the document within the collection with the one or more selected categorical labels."*).

Lewak teaches a method of an FC Manager running as a background process, checking the path of a previously saved file during "null events" for categorization (Lewak column 7 lines 55-67). Lewak does not specifically teach a method of incrementally retraining a classifier. However, Herz teaches a method of categorizing text messages utilizing a user target profile interest summary, said summary is automatically updated on a continuing basis (Herz column 7 lines 15-17; compare with claim 11 *"incrementally retraining a classifier to adapt to modifications of the collection."*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the method of Herz to the method of Lewak, because of Herz's taught advantage of updating profiles, providing a way to keep a user profile updated so that it dynamically responds to changing interests (Herz column 7 lines 16-18).

Lewak teaches a File Control (FC) Manager program running in the background of a session. During periods of idle (i.e. periods of inactivity), said Manager retrieves a previously saved file and check its path and categorize said file (category: "uncategorized") if not already categorized (Lewak column 7 lines 50-67; compare with claim 11 *"wherein the incremental retraining is performed using a lazy strategy for incrementally retraining the classifier "*). Since deferring categorization in this manner is a form of lazy strategy, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply Herz's retraining during Lewak's inactivity periods, so as to provide Lewak the benefit of increased performance during periods of high user activity.

In regard to dependent claim 13, Lewak teaches a method of opening a saved file and invoking an FC Manager with a "Categorize" command for category selection by the user (Lewak, column 8 lines 1-5; compare with claim 13).

In regard to dependent claim 14, Lewak teaches a method whereby upon the category of E-Mail is selected for a file, the user is given indication of related linked category descriptions (Lewak, column 15 lines 39-51; compare with claim 14).

In regard to dependent claim 15, Lewak teaches a method whereby linked category descriptions are indicated to the user by way of a distinctive style, or check mark, or a descriptive dialog box (Lewak, column 15 lines 5-55; compare with claim 15 lines 1-3, *"...labeling display buttons with the plurality of most likely categorical labels, and the displaying step comprises the step of displaying the labeled display buttons..."*).

Lewak teaches a method of categorizing an opened file at the point of a first save to disk (Lewak column 7 lines 55-67; compare with claim 15 line 3, *"...with the document."*).

In regard to dependent claim 16, Lewak teaches a method of a file manager display showing a column of file type category entries in alphabetical order, along with three other columns of categories, each column containing different entries in alphabetical order (Lewak, column 8 lines 31-38, Figure 5; compare with claim 16).

In regard to dependent claim 17, Lewak teaches a method whereby upon the selection of a categorize button on an open file, an FC Manager is run, producing a file manager display showing current categories (Lewak, column 8 lines 1-5, 31-38; compare with claim 17).

In regard to dependent claim 18, Lewak teaches a method whereby a "categorize" command is invoked by a user to run the FC Manager to categorize an open file (Lewak column 8 lines 1-5; compare with claim 18).

In regard to dependent claim 19, Lewak teaches a method whereby a "categorize" button is used to invoke the method as disclosed in claim 18 above (Lewak column 8 lines 1-3, column 9 lines 5-7; compare with claim 19).

In regard to dependent claim 20, Lewak teaches a method of a File Information Directory table (FID) comprising a set of columns containing file names, file locations, and categories associated with each file by a user (Lewak column 6 lines 16-22; compare with claim 20).

In regard to dependent claim 21, Lewak teaches a method of a file manager display showing categories and descriptions (Lewak column 8 lines 31-38). Lewak also discloses a method whereby linked categories of a selected category can be shown and selected (Lewak column 15 lines 39-51; compare with claim 21, *"receiving, from the user, data representative....the plurality of displayed categorizational shortcuts..."*). Lewak does not specifically teach a method of displaying (or selecting from) a standard list of all categorical labels. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lewak to incorporate a standard list, because a "Full Lists" option is disclosed as an example of inhibiting category search contraction (Lewak column 12 lines 29-31; compare with claim 21 *"...displaying a standard list of all categorical labels..."*, and *"...or the standard lists."*). Applying this modification provides increased user selectability to the method of Lewak.

In regard to dependent claim 23, Lewak teaches a method whereby a user chooses a "categorize" command to re-categorize an already categorized file (Lewak column 9 lines 5-10; compare with claim 23).

In regard to dependent claim 24, claim 24 incorporates substantially significant subject matter

as claimed in claim 20, and in further view of the following, is rejected along the same rationale.

Lewak teaches a method whereby a user makes a first save of a newly created file to disk (Lewak

column 7 lines 55-57; compare with claim 24 *"receiving, from the user, addition data....into a tofolder")*.

Lewak teaches a method whereby a File Control system retrieves the file path previously saved,

and analyzes the saved file for categorization (Lewak column 7 lines 58-67; compare with claim 24 *"re-*

training the classifier in response to the addition data. ").

In regard to dependent claim 25, Lewak does not specifically teach a method of assigning the

added document to a tofolder during re-training. However, it would have been obvious to one of ordinary

skill in the art at the time of the invention to modify Lewak to incorporate the method of assigning,

because Lewak suggests a method whereby categories which describe a current file are selected, causing

new entries to be created in the FID containing the file data (along with file path associations), and

associated categories (Lewak column 6 lines 17-22, column 8 lines 61-67, column 9 lines 1-4; compare

with claim 25), providing increased file versatility to the File Control method taught by Lewak.

In regard to dependent claim 26, claim 26 incorporates substantially similar subject matter as

claimed in claim 47, and is rejected along the same rationale.

In regard to dependent claim 27, claim 27 incorporates substantially similar subject matter as

claimed in claim 24, and in further view of the following, is rejected along the same rationale.

Lewak teaches a method of deleting a file, which impacts the integrity of the identifiers in the

FID (Lewak column 14 lines 40-43, 51; compare with claim 27 *"receiving from the user, deletion*

data....from a fromfolder").

Lewak teaches a method whereby (on a Macintosh system), upon the deletion of a file, the Alias

Record for the file is updated in the FID (Lewak column 14 lines 60-65; compare with claim 27 *"re-*

training the classifier in response to the deletion data.").

In regard to dependent claim 28, Lewak does not specifically teach a method of unassigning the

removed document from the fromfolder during re-training. However, it would have been obvious to one

of ordinary skill in the art at the time of the invention to modify Lewak to incorporate the method of

unassigning, because Lewak suggests a method whereby upon file deletion, the Alias Record is updated

in the FID, keeping the FID current after each attempted access (Lewak column 14 lines 40-43, 51, 60-

65; compare with claim 28), providing increased file versatility to the File Control method taught by

Lewak.

In regard to dependent claim 29, claim 29 incorporates substantially similar subject matter as

claimed in claim 26, and is rejected along the same rationale.

In regard to dependent claim 30, claim 30 incorporates substantially similar subject matter as

claimed in claim 24, and in further view of the following, is rejected along the same rationale.

Lewak teaches a method of moving a file to another directory, which impacts the integrity of the

identifiers in the FID (please see Lewak column 14 lines 40-43, 44; compare with claim 30 *"receiving*

from the user, move data....to a destination folder").

Lewak teaches a method whereby upon the moving of a file, a search is made to find the file,

based upon creation date/time search criteria (Lewak column 14 lines 66-67, column 15 lines 1-7;

compare with claim 30 *"re-training the classifier in response to the deletion data.")*.

In regard to dependent claim 31, claim 31 reflects the combined subject matter of claims 25 and 28, and is rejected along the same rationale.

In regard to dependent claim 32, claim 32 reflects the combined subject matter of claims 26 and 29, and is rejected along the same rationale.

In regard to dependent claim 33, Lewak teaches a method whereby a selected file that has been categorized may by recategorized by clicking on a "Categorize" button (Lewak column 9 lines 5-10; compare with claim 33).

In regard to dependent claim 44, Lewak teaches a method whereby an FC Manager initializes all data structures involved by reading data from related data files (FCT and FTD tables), as well as previously saved "last used" values (Lewak column 7 lines 39-4; compare with claim 44).

In regard to dependent claim 45, claim 45 incorporates substantially similar subject matter as claimed in claim 20, and in further view of the following, is rejected along the same rationale.

Lewak teaches a method of a FID table read into the memory of a computer, said FID table containing file names, associated categories, and file locations (Lewak, column 6 lines 17-22, column 7 lines 39-42; compare with claim 45).

In regard to dependent claim 47, Lewak teaches a method whereby a file is categorized using a File Control Manager program, said program containing a File Identification table with file locations associated with file names (Lewak column 1 lines 28-29, 41-45, column 6 lines 17-22, column 8 lines 1-5). Lewak does not specifically teach a method of identifying excluded folders to be excluded from classification. However, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Lewak to incorporate excluded folders, because the method of exclusion is

exemplified with search filter definitions, in which categories that find no data are excluded from

subsequent pick list possibilities (Lewak column 10 lines 25-37; compare with claim 47). The taught

advantage of exclusion provides increased categorical efficiency to the FID method as taught by Lewak.

In regard to dependent claim 48, Claim 48 incorporates substantially similar subject matter as

claimed in claim 20, and in further view of the following, is rejected along the same rationale.

Lewak teaches a method of a FID table containing the last update time and date for a file (Lewak

column 6 lines 17-22; compare with claim 48 *"determining a time of a last step of re-training"*).

Lewak teaches a method whereby, for each closed file, a conditional categorization is performed

by checking if an FID entry exists with the same creation time and date, subsequently opening the

Categories Window if time/date is not the same (Lewak column 8 lines 7-15; compare with claim 48

"retraining the classifier", and *"modified after the determined time"*. Lewak does not specifically teach

a method of retraining the classifier on each folder. However, it would have been obvious to one of

ordinary skill in the art at the time of the invention to modify Lewak to incorporate the use of folders,

because initial displayed editable category types is an example of the contents of a displayed file Manager

(Lewak column 8 lines 39-44; compare with claim 48 *"on each folder"*). The inclusion of folders

provides increased order to the retraining method taught by Lewak.

In regard to dependent claim 49, claim 49 incorporates substantially similar subject matter as

claimed in claims 20, 44 and 48, and is rejected along the same rationale.

In regard to dependent claim 50, Lewak teaches a method whereby a file is categorized using a

File Control Manager program (Lewak column 8 lines 1-5). Lewak does not specifically teach a method

whereby the classifying step uses the TF-IDF principle. However, Herz teaches a method whereby a

preferred adaptation/learning method is the TF-IDF principle (Herz column 14 lines 10-12; compare

with claim 50). It would have been obvious to one of ordinary skill in the art at the time of the invention

to apply the TF-IDF method of Herz to the method of Lewak, because of Herz's taught advantage of

adaptive weighting schemes, providing increased versatility to the categorization method as taught by

Lewak.

In regard to dependent claim 51, Lewak teaches a method whereby an opened file is

categorized by an FC system through the use of a "Categorize" command (Lewak column 8 lines 1-5).

Lewak does not specifically teach a method wherein an electronic document is an e-mail message.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to

modify Lewak to incorporate e-mail messages, because "E-Mail" is an example of a category disclosed

by Lewak (Lewak, column 15 lines 39-46; compare with claim 51). The incorporation of e-mail

messages provides increased versatility to the categorization method as taught by Lewak.

In regard to dependent claim 60, Lewak teaches a method whereby a File Control Manager is

invoked by opening and saving a file (Lewak, column 7 lines 55-60). Lewak does not specifically teach a

method whereby an electronic document comprises data sets that are not entirely viewable, but

categorizable nevertheless. However, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify Lewak to incorporate categorizable, yet partially hidden data sets, because

shortening category description lists is an example of managing a higher level hierarchy to manage

limited subsets of a complete category list, providing increased category manageability to the file method

as disclosed by Lewak (Lewak, column 9 lines 60-67, column 10 lines 1-5; compare with claim 60).

In regard to dependent claim 61, Lewak teaches a method whereby category descriptions are stored as records of a random access data base file (Lewak column 5 lines 40-43; compare with claim 61 "*a program storage device*").

Lewak teaches a computer filing system utilizing various file categories, said system automatically commencing to assist a user with said categorizing and classifying (Lewak Abstract, also Figure 5 items 50, 60; compare with claim 61 "*automatedly assisting*" and "*an automated classifier*").

Lewak teaches a method of suggesting file categories by correlating word patterns in a current file document with category descriptions utilizing an FC Manager (Lewak, column 8 lines 6-15, column 9 lines 50-55; compare with amended claim 61, "*classifying, with a classifier, a document...*"). Lewak does not specifically teach obtaining a plurality of most likely categorical labels. However, Herz teaches a method of generating for each user a customized rank-ordered listing of target objects most likely to be of interest to that user (Herz column 7 lines 10-16; compare with claim 61 "*...to obtain a plurality of most likely categorical labels*", and "*...from the plurality of most likely categorical labels*"). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the method of Herz to the method of Lewak, because of Herz's taught advantage of document suggestion, providing an efficient method of allowing users to select articles of interest from a large set of articles (Herz column 2 lines 40-42).

Lewak teaches linking category descriptions "Sent", "Received", "Action", and "Urgent" to a main category "E-Mail", so that said linking occurs when said category "E-Mail" is chosen, which provides reasonable suggestion to one of ordinary skill in the art at the time of the invention of the use of a categorization shortcut, since extra paths are created for said linked descriptions (Lewak column 15 lines 39-46; compare with claim 61 "*deriving a plurality of categorizations shortcuts...*"), which helps to provide freedom from the restrictions imposed by present day computer filing systems (Lewak column 3 lines 62-65).

Lewak teaches a method of a user interface, comprising a category window with category descriptions and types (Lewak, column 8 lines 31-38; compare with claim 61, *"displaying to the user, a representation of the plurality of most likely categorical labels"*).

Lewak teaches a method whereby categories describing the current file can be selected by a user (Lewak, column 8 lines 61-65; compare with claim 61, *"receiving from the user, data representative of one or more selected categorical labels"*).

Lewak teaches a method whereby after category selection is completed by the user, the new category/file associations are stored within a File Information Directory (Lewak, column 8 lines 66-67, column 9 lines 1-4; compare with claim 61, *"labeling the document within the collection with the one or more selected categorical labels."*).

Lewak teaches a method of an FC Manager running as a background process, checking the path of a previously saved file during "null events" for categorization (Lewak column 7 lines 55-67). Lewak does not specifically teach a method of incrementally retraining a classifier. However, Herz teaches a method of categorizing text messages utilizing a user target profile interest summary, said summary is automatically updated on a continuing basis (Herz column 7 lines 15-17; compare with claim 61 *"incrementally retraining a classifier to adapt to modifications of the collection."*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the method of Herz to the method of Lewak, because of Herz's taught advantage of updating profiles, providing a way to keep a user profile updated so that it dynamically responds to changing interests (Herz column 7 lines 16-18).

Lewak teaches a File Control (FC) Manager program running in the background of a session. During periods of idle (i.e. periods of inactivity), said Manager retrieves a previously saved file and check its path and categorize said file (category: "uncategorized") if not already categorized (Lewak column 7 lines 50-67; compare with claim 61 *"wherein the incremental retraining is performed using a lazy strategy for incrementally retraining the classifier "*). Since deferring categorization in this manner is a form of lazy strategy, it would have been obvious to one of ordinary skill in the art at the time of the

invention to apply Herz's retraining during Lewak's inactivity periods, so as to provide Lewak the benefit of increased performance during periods of high user activity.

In regard to dependent claim 62, Lewak teaches user selectable (clickable) categories (Lewak column 8 lines 19-22, 61-66; compare with claim 62 *"the step of displaying....labeled with one of the categorical labels"*). Although Lewak does not specifically show this as "buttons", nevertheless, the limitation of buttons would have been obvious to one of ordinary skill in the art at the time of the invention, in view of Lewak, because Lewak's teaching of said displayed selectable categories along with various displayed buttons (Lewak Figure 5 items 50, 60), suggests the use of buttons, providing the advantage of a familiar graphical construct for choosing categories.

Lewak teaches a "Categorize" button (Lewak Figure 5 item 60). Subsequent to user clicking of said button, the system of Lewak automatically recategorizes a file, said recategorization involving a file identification directory containing location information (Lewak column 6 lines 16-32, column 8 lines 61-67, column 9 lines 5-10, column 10 lines 15-19; compare with claim 62 *"the step of receiving representative data....on the category button"*, and *"the step of labeling the document....without need for any other activity by the user."*).

In regard to dependent claim 63, claim 63 incorporates substantially similar subject matter as claimed in claim 62, and is rejected along the same rationale.

In regard to dependent claim 64, claim 64 incorporates substantially similar subject matter as claimed in claim 11, and in further view of the following, is rejected along the same rationale.

Lewak teaches a File Control (FC) Manager analyzing a newly created file subsequent to a first save of said file, analyzation is deferred. Lewak's categorization process via said FC Manager is a form of bookkeeping (i.e. storing paths, etc.) (Lewak column 7 lines 55-67; compare with claim 64 *"deferring*

retraining of the classifier", and "*performing bookkeeping operations....folder to another*"). Retraining a

classifier has been previously discussed (see rejection of claim 11, above).

Lewak teaches an FC Manager retrieving and analyzing a previously saved path against

categorized files, said analyzation triggered by a period of inactivity (Lewak column 7 lines 55-67;

compare with claim 64 "*automatically triggering....that have been deferred.*").

In regard to dependent claim 65, Lewak teaches a method whereby a selected file that has been

categorized may by recategorized by clicking on a "Categorize" button (Lewak column 9 lines 5-10).

In regard to dependent claim 66, Lewak teaches a method whereby an File Control Manager

analyzes a newly created file subsequent to achieving a threshold of a first save of said file (Lewak

column 7 lines 55-67).

In regard to dependent claim 67, Lewak teaches a method whereby an FC Manager retrieves

and analyzes a previously saved path against categorized files during periods of inactivity (Lewak

column 7 lines 55-67).

In regard to dependent claim 68, Lewak teaches a method whereby a selected file that has been

categorized may by recategorized by clicking on a "Categorize" button (an "instant" strategy) (Lewak

column 9 lines 5-10).

Claims 37-43, 46, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewak

and Herz as applied to claim 11 above, and further in view of Lang et al. (hereinafter Lang), U.S.

Patent No. 5,867,799 issued February 1999.

In regard to dependent claim 37, Lewak teaches a method whereby a file is categorized using a

File Control Manager program, said program containing a File Identification table with file locations

associated with file names (Lewak column 1 lines 28-29, 41-45, column 6 lines 17-22, column 8 lines 1-

5; compare with claim 37 *"...for each folder..."* and *"...a subset of folders..."*). Lewak does not

specifically teach a method whereby the classifying step comprises the steps of tokenizing,

tallying/comparing occurrences, computing token weights, creating similarity scores, and identifying

folder subsets. However, Lang teaches a method of tokenizing a document into tokens (Lang column 10

lines 31-33, Figure 5 box 301; compare with claim 37).

Lang also discloses a method of computing the term frequency (TF) of a token within a document

(Lang column 10 lines 22-23, 29-33; compare with claim 37).

Lang also teaches a method of a computed token weight for a given document (IDF) by

multiplying the term frequency by the inverse of the document frequency (Lang column 10 lines 36-38;

compare with claim 37, *"computing..."* and *"...a token weight of each token."*).

Lang also teaches a method of comparing a term frequency (TF) and a token weight (IDF) by

analyzing the cosine between the computed vectors, the related example disclosed pertains to a single

word, or token, from two documents (Lang column 10 lines 50-56, column 23 lines 50-52; compare with

claim 37).

Lang also teaches a method of a similarity measure between TF-IDF vectors (Lang column 10

lines 50-52, column 23 lines 48-57; compare with claim 37 line 6).

Lang also teaches a method of self-optimization in the form of a highest credibility value, said value dependent upon a TF-IDF technique (Lang column 14 lines 8-22; compare with claim 37 line 7, *"identifying..."*, and *"...for which the similarity score is highest."*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the TF-IDF related methods of Lang as taught above, to the methods disclosed by Lewak, because of Lang's taught advantage of adaptive weighting schemes, providing increased predictive accuracy to the categorization and folder methods as disclosed by Lewak.

In regard to dependent claim 38, Lewak does not specifically teach a method of removing folders for which a similarity score is lower then a specified threshold. However, Lang teaches a method of parsing articles, and throwing out tokens occurring less than a preselected threshold (Lang column 12 lines 58-59; compare with claim 38). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the method of Lang to the method of Lewak, because of Lang's taught advantage of selective analyzing, providing increased selective accuracy to the categorization and folder methods as disclosed by Lewak.

In regard to dependent claim 39, claim 39 incorporates substantially similar subject matter as claimed in claim 37, and is rejected along the same rationale.

In regard to dependent claim 40, claim 40 incorporates substantially significant subject matter as claimed in claim 37, and in further view of the following, is rejected along the same rationale.

Lewak teaches a method of categorizing an open file by invoking a File Control Manager via a "Categorize" button, said manager containing a FID table with a set of columns labeled by file names and file locations (Lewak column 6 lines 17-22, column 8 lines 1-5). Lewak does not specifically teach a method of separately tokenizing/labeling portions of a document. However, Lang teaches a method for

extracting information from a data stream, using at least a portion of each of a user profile (Lang column

5 lines 61-67, column 6 lines 1-3; compare with claim 40). It would have been obvious to one of ordinary

skill in the art at the time of the invention to apply the portioning method as taught by Lang to the method

of Lewak, because of Lang's taught advantage of partitioning, providing increased file analyzation

selectivity to the file method as taught by Lewak.

In regard to dependent 41, claim 41 incorporates substantially significant subject matter as

claimed in claims 37 and 39, and in further view of the following, is rejected along the same rationale.

Lewak does not specifically teach a method of adding the number of occurrences of each token to

a tokencount of a tofolder. However, Lang teaches a method of a term frequency, which is the number of

times a token appears in a document (Lang column 10 lines 30-34; compare with claim 41 "...adding the

number of occurrences of each token..."). It would have been obvious to one of ordinary skill in the art at

the time of the invention to apply the token count method of Lang to the file name/location association

method of Lewak, because of Lang's taught advantage of token counts, providing increased statistical

information to the File Control method as taught by Lewak.

In regard to dependent claim 42, claim 42 incorporates substantially significant subject matter

as claimed in claim 41, and in further view of the following , is rejected along the same rationale.

Lewak does not specifically teach a method of subtracting the number of occurrences of each

token of the fromfolder. However, Lang teaches a method whereby upon parsing of a training set, a

specified number of the most frequent tokens are thrown out (subtracted) from the set (Lang column 12

lines 58-59; compare with claim 42 "...*subtracting the number of occurrences of each token from the*

tokencount of the fromfolder."). It would have been obvious to one of ordinary skill in the art at the time

of the invention to apply the token subtraction method of Lang to the file name/location association

method of Lewak, because of Lang's taught advantage of token subtraction, providing increased statistical accuracy to the File Control method as taught by Lewak.

In regard to dependent claim 43, claim 43 reflects the combined subject matter of claims 41 and 42, and is rejected along the same rationale.

In regard to dependent claim 46, claim 46 incorporates substantially similar subject matter as claimed in claim 41, and is rejected along the same rationale.

Claims 52, 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewak and Herz as applied to claim 11 above, and further in view of Using Netscape (hereinafter Netscape), 1995 Que Corporation pp. 55, 67.

In regard to dependent claim 52, Lewak teaches a method whereby an opened file is categorized by an FC system through the use of a "Categorize" command (Lewak column 8 lines 1-5). Lewak does not specifically teach a method wherein an electronic document is a web page and the collection is a set of bookmarks. However, Netscape teaches a method of a bookmark file presented as a web page (Netscape p.67, 3rd paragraph, Figure 4.4; compare with claim 52). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the web page and bookmark method as disclosed by Netscape to the method of Lewak, because of Netscape's taught advantage of World Wide Web and bookmarking compatibility, providing increased Internet adaptation and file retrieval to the file categorization method as taught by Lewak.

In regard to dependent claim 56, Lewak teaches a method whereby an opened file is categorized by an FC system through the use of a "Categorize" command (Lewak column 8 lines 1-5).

Lewak does not specifically teach a method wherein an electronic document is a multimedia document. However, Netscape teaches a method of a web page containing graphics, text, and sound (Netscape p.55, Playing Linked Sound Files, Figure 3.9; compare with claim 56). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the web graphic/sound/text method as disclosed by Netscape to the method of Lewak, because of Netscape's taught advantage of World Wide Web multimedia compatibility, providing increased Internet adaptation to the file categorization method as taught by Lewak.

In regard to dependent claims 57-59, claims 57-59 incorporates substantially significant subject matter as claimed in claim 56, and is rejected along the same rationale.

Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewak, Herz, and Lang as applied to claims 26, 29, 32 above, and further in view of Netscape.

In regard to dependent claim 53, claim 53 incorporates substantially similar subject matter as claimed in claim 52, and in further view of the following, is rejected along the same rationale.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the web page and bookmark method as taught by Netscape to the method of Lewak, because of Netscape's taught advantage of World Wide Web and bookmarking compatibility, providing increased Internet adaptation and file retrieval to the file categorization method as taught by Lewak.

In regard to dependent claim 54, claim 54 incorporates substantially similar subject matter as claimed in claim 53, and is rejected along the same rationale.

In regard to dependent claim 55, claim 55 incorporates substantially significant subject matter

as claimed in claim 54, and is rejected along the same rationale.

(11)   Response to Argument

Beginning on page 8 of the Appeal Brief (hereinafter the Brief), Appellant argues the following

issues which are accordingly addressed below.

a.   **"(i) The Combination of Lewak and Herz does not disclose of suggest classifying, with a**

classifier, a document to obtain a plurality of most likely categorical labels." (pages 11-12 of the

Brief).

The examiner respectfully disagrees. The rejection of claim 11 relies on Lewak to teach

suggesting file categories by "correlating word patterns in a current file document" with category

descriptions utilizing an FC Manager. The examiner uses this teaching to teach *"classifying, with a*

classifier, a document... "). Please note that the cited portion of Lewak (column 9 lines 50-55) relied upon

in the rejection of claim 11 specifically states *"... word patterns in categorized files can be correlated to*

the category descriptions. This information can be used to automatically assign (or simply suggest)

category descriptions to new and existing uncategorized files.". The examiner uses Herz to teach

obtaining a plurality of <u>most likely</u> categorical labels. Herz teach a method of ranking "desirable objects"

(i.e. news articles, etc.), using metrics of word frequency and application of a *"target interest profile"*

(Herz Abstract). Herz uses said metrics to create a customized rank-ordered listing of target objects (i.e.

ranking of news articles) most likely to be of interest to that user. The examiner applies Herz's ranking of

documents to Lewak's categorization method in order to provide Lewak the capability of suggesting

category descriptions within its GUI which are "most likely" to be of interest to the user. It is respectfully submitted that, contrary to Appellant's opinion regarding the examiner's alleged narrow focus, use of impermissible hindsight, etc., the ranking of documents using the metrics above would provide Lewak more accurate (i.e. most likely, therefore more efficient) category suggestions based at least in part on user interests (as well as word frequency, etc.). It is respectfully stressed that Lewak teaches category label suggestion pertaining to documents, and Herz is used to teach ranking according to a user profile, therefore helping Lewak to suggest categories "most likely" commensurate with the interests of a user.

b.   "(ii) The combination of Lewak and Herz does not disclose or suggest deriving a plurality of categorizations shortcuts from the plurality of most likely categorical labels" (pages 13-14 of the Brief).

The examiner respectfully disagrees. Lewak teaches the capability of assigning linking categories to the category of "E-Mail", thus providing at least the suggestion of a shortcut reflecting the linked conglomeration of related category descriptions "Sent", "Received", "Action", and "Urgent". Appellant claims in pertinent part (claim 11) *"deriving a plurality of categorizations shortcuts from the plurality of most likely categorical labels"*. It is respectfully submitted that Appellant's arguments are incommensurate in scope with the claimed invention. In particular, the examiner does not see anything in claim 11 which limits the scope of "categorization shortcuts" to Appellant's definition as presented at bottom of page 13 of the Brief ("categorization shortcuts provides methods for presenting the most likely categorical labels (as determined by classification) in manner that accentuates such labels for fast and efficient labeling/categorizing of the electronic document."). The claimed "categorization shortcut" can be fairly interpreted as a category (i.e. "E-Mail"), which when accepted, providing the capability of

linking the same document to related category descriptions. Linking said document with related

categories as explained above certainly provides for efficient categorization and selection of the document

(and also helps free the user from restrictions imposed by hierarchical based filing systems).

c.   "(iii) The combination of Lewak and Herz does not disclose or suggest incrementally

retraining the classifier to adapt to modifications of the collection, wherin the incremental

retraining is performed using a lazy strategy" (pages 14-17 of the Brief).

The examiner respectfully disagrees. It is respectfully submitted that the examiner's analysis is

not based, in part, on contradictory assertions. It is respectfully submitted that Lewak teaches classifying

documents into categories. Herz is used to teach "incrementally retraining" (Lewak's) classifier "to adapt

to modifications of the collection". Lewak's teaching of "deferred categorization" is used to teach a "lazy

strategy" as applied to the combined teachings of Lewak and Herz.

In additional support of the instant rejections, Lewak teaches an automated classifier which

classifies documents into categories (Lewak Figure 5). Lewak teaches a "Categorize" button for

categorizing (classifying) documents (Lewak Figure 5 - item 60). Lewak also teaches a user choosing a

"categorize" command to re-categorize an already categorized file (Lewak column 9 lines 5-10, see also

the examiner's rejection of claim 23). This citing also teaches that subsequent to clicking of said button,

no further file identification is necessary, therefore, lending additional support to the examiner's rejection

regarding Lewak's teaching of "automation" (see also Lewak column 7 lines 64-66). It is respectfully

noted that Lewak column 7 lines 64-67 teaches "the FC Manager will automatically categorize the file

with the special category 'Uncategorized' ", therefore automatic classification (classified as

"Uncategorized") has taken place, prior to user notification for possible further categorization.

Since Herz's analysis/ranking of a collection of documents is based on a "user target profile interest summary" it is respectfully submitted that the interest profile is used in Herz's classification (ranking) of documents, and therefore the user interest profile has a direct bearing on said analysis and final ranking of said collection. The updating of said user interest profile (on a continuing basis) is used to "retrain" Herz's ranking process, and is applied to Lewak's categorization process accordingly.

It is respectfully noted that a "lazy strategy" is a term of art generally defined as actions to be performed only when needed and only to a certain extent. Since Lewak's File Control Manager running in the background of a session checks the paths of files and performs (initial) categorization if necessary during periods of idle (i.e. periods of inactivity – without user interaction), this teaching can be reasonably interpreted as a "lazy strategy" for initially categorizing files.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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August 8, 2004

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